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# DISEASE OF HOG CHOLERA

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## HEARINGS

BEFORE THE

### SUBCOMMITTEE ON APPROPRIATIONS OF THE COMMITTEE ON AGRICULTURE OF THE HOUSE OF REPRESENTATIVES

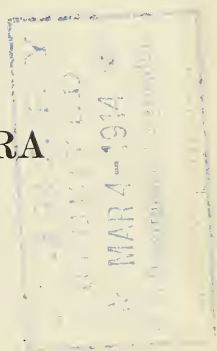
SIXTY-THIRD CONGRESS  
SECOND SESSION

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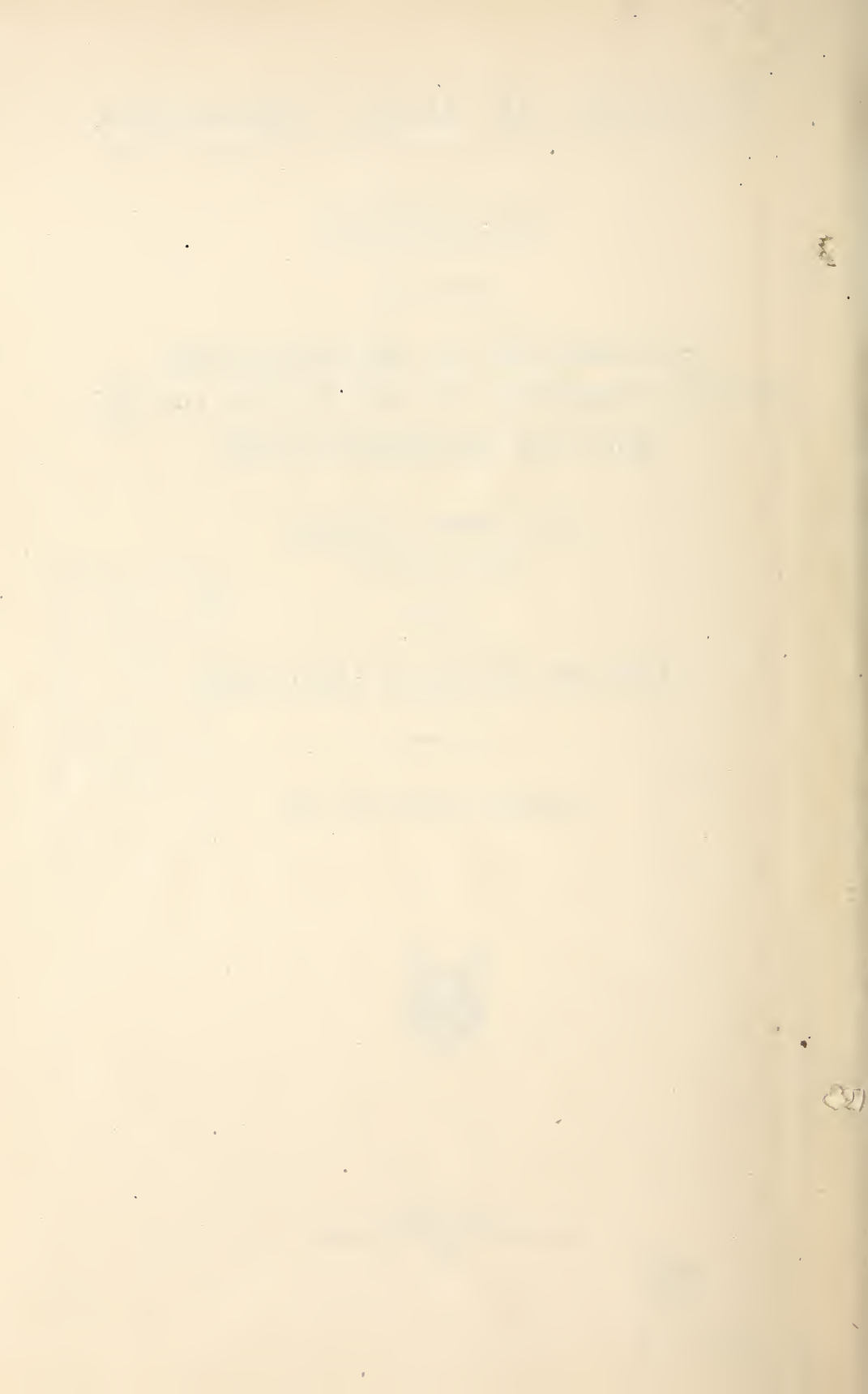
### DISEASE OF HOG CHOLERA

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WEDNESDAY, FEBRUARY 4, 1914



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## HOG CHOLERA.

SUBCOMMITTEE OF THE COMMITTEE ON AGRICULTURE,

HOUSE OF REPRESENTATIVES,

*Washington, D. C., Wednesday, February 4, 1914.*

The subcommittee met at 11 o'clock a. m., Hon Asbury F. Lever (chairman) presiding.

The CHAIRMAN. Now, gentlemen, we have just 50 minutes in which to get the information we desire on this hog-cholera proposition from Dr. Galloway and Dr. Melvin. The immigration bill, I understand, comes up immediately after the House meets, and all of us, I presume, want to be on the floor at that time.

Dr. Galloway, the subcommittee desires to have you furnish it, if possible, with what you regard as the most feasible way of handling this hog-cholera situation and the limit of the amount the Department of Agriculture thinks it can spend during this fiscal year judiciously and wisely in its control.

### STATEMENT OF DR. BEVERLY T. GALLOWAY, ASSISTANT SECRETARY OF THE DEPARTMENT OF AGRICULTURE.

Dr. GALLOWAY. As the situation has developed, Mr. Chairman, it is evident that there is necessity for an immediate urgency appropriation. The department has given careful consideration to the direction the work should take, and believes for the present we should consider such an appropriation as an emergency item. In other words, the department is not yet in a position to definitely outline a policy with regard to the entire handling of the hog-cholera question for a term of years. We are not ready for that, but we are ready, however, for some quite definite recommendations as to what we believe should be done in this present emergency. We carried on last year certain lines of work which was authorized by Congress, conducting it in four counties, along the line of demonstrating the practicability of eradicating hog cholera from these counties.

Mr. McLAUGHLIN. You said four counties?

Dr. GALLOWAY. Four counties; yes. We have learned from this experience that considerable good can be accomplished, and we have all the figures (which, if the committee so desires, I will include in the record) as to what the results actually are—as to the number of hogs saved, the cost of the work, and so forth.

(The statement referred to will be found at the end of to-day's hearing.)

This work has made it evident to us that it should be continued and enlarged, for the reason that we yet have a number of points to develop with reference to quarantine measures, with reference to sanitary measures, with reference to cooperation with all the agencies within the States that will necessarily have to cooperate if the work is ultimately to be made entirely successful. So that in considering

the matter fully we have come to the conclusion that we could carry this work on with our existing serum plant in about 15 counties. If it is to be extended in additional counties, then we would of necessity have to enlarge our serum plant, and that would increase the amount to that extent. To do the work we require about \$300,000.

Now, after fully considering the matter, I am convinced that additional good work could be done in the direction of making actual field demonstrations outside of these counties, using the serum, and cooperating with the States.

Then we believe it is highly important that some immediate steps should be taken to protect the farmers against spurious serums that are being made and sent out. It will take about \$50,000 to protect the States most vitally interested in this matter. There are about 75 or 80 private establishments, and Dr. Melvin thinks it would require a man in each of the plants as an inspector, who must be an expert, and who would have to be paid from \$2,000 to \$2,500 a year. Not all of these establishments, however, have secured licenses.

The CHAIRMAN. You mean it will take \$50,000 in the total? You have estimated for \$25,000 in the bill for that purpose, and you mean it will take \$25,000 in addition to that—\$50,000 in all?

Dr. GALLOWAY. \$50,000 in all.

Mr. HAUGEN. Do you have authority under the law to send your men there?

Dr. GALLOWAY. Yes. I am developing this discussion to the end of eliminating everything on hog cholera from the regular appropriation bill and substituting an emergency measure. To carry out the work of inspection would require, as I indicated, approximately \$50,000. That will enable us to put these men in the establishments, and when the establishments are not conducting their work properly, when it is deemed they are not using the proper and usual sanitary precautions, or are doing anything that, in a measure, is threatening or vitiating the effectiveness of the serums, their license may be immediately taken from them and they would have to go out of business. That is the way to do it at the present time, but ultimately there must be some very stringent law prepared that will cover the whole situation and protect the buyers. Our solicitor has completed this morning the draft of such a law and placed it in my hands, but I have not had the time to consider it. With this item of \$50,000 we can handle the situation temporarily.

The additional work, requiring about \$150,000, that might be done effectively, would be along the line of cooperating with the States, where they have serum plants, to the end of furnishing farmers applying for this serum with the material and advice in the proper use of the serum. Then, if at the end of the year it is decided to discontinue the work and let the States deal with it, we would be in a position to do so; or, if it is decided to go ahead with a definite plan of cooperation with the States, we would be in a position to furnish the facts which would be necessary to attack the problem in that way. The cooperative demonstration work with individual farmers would, as indicated, cost \$150,000, making \$500,000 in all.

The CHAIRMAN. For the entire work?

Dr. GALLOWAY. Yes, sir. Now, unless this money is made quickly available, unless we can get it on or about the 1st of March, it will be of little use this year.



The CHAIRMAN. Now, Doctor, let me see if I get your idea. First of all you would use \$300,000 in the matter of demonstration, to the satisfaction of the department, in the direction of eradicating hog cholera from a definite area?

Dr. GALLOWAY. Yes, sir.

The CHAIRMAN. You would use \$50,000 in placing inspectors in serum plants to see that proper serum was being manufactured?

Dr. GALLOWAY. Yes, sir.

The CHAIRMAN. And, in the third place, you would use the balance—\$150,000—in educational work among the people in cooperation with the States?

Dr. GALLOWAY. Yes, sir.

The CHAIRMAN. The States furnishing the serum?

Dr. GALLOWAY. Yes; the States furnishing the serum.

Mr. LEE. The States or the individuals?

Dr. GALLOWAY. The States would furnish the serum.

Mr. McLAUGHLIN. That \$50,000 that you spoke of would mean an increase of \$25,000 in the appropriation now made for that work?

Dr. GALLOWAY. As far as that item is concerned in your appropriation bill, you could drop it, unless we find that there are viruses and serums other than hog-cholera serum which need attention.

Mr. HAUGEN. Now, Doctor, I want to call your attention to Dr. Melvin's statement printed on page 28 of our hearings. He says:

For instance, Ohio has a very complete organization; they have a laboratory that they are just beginning to use, costing \$100,000 to build. Next year they will handle a great part of the State—not all of it, because it would take, in my opinion, four or five such laboratories to produce serum sufficient for the entire State of Ohio.

Dr. GALLOWAY. That is very true.

Mr. HAUGEN. Now, then, if it is impossible for the States to furnish the serum, States like the great State of Ohio, that has taken a forward movement in this direction, which can furnish only one-fifth of it, how can we expect the States to supply the serum?

Dr. GALLOWAY. Understand, we are not stating here that we are going to provide the serum for everybody that applies for it.

Mr. HAUGEN. Yes; but now the situation, Doctor, is this: You have discovered and you have prescribed a remedy?

Dr. GALLOWAY. Yes.

Mr. HAUGEN. Your department, and, I believe, everybody that has given it a thorough trial, is satisfied as to the efficacy of the serum. I do not believe there is any question about that, is there, Dr. Melvin?

Dr. MELVIN. No; I do not believe there is. We have had very good success with it.

Mr. HAUGEN. Now, then, we have a remedy, and unfortunately we have a remedy that is not available. The only way it can be made available is through the States or the Federal Government, and you spoke a moment ago about putting inspectors in these factories. Do you believe a business man, with just fair common sense, would open up a plant to manufacture serum up to the standard as prescribed and sell it in competition with State plants subsidized to the extent of \$100,000 a year and selling it at cost and giving it away? Is that feasible?

Dr. MELVIN. Mr. Haugen, a gentleman told Dr. Dorset, in Chicago, in December last, he would be glad to pay for the services of a man if the Government stationed one in his plant.

Mr. HAUGEN. Pay for what?

Dr. MELVIN. Pay for the services of the man if the Government stationed one in his plant.

Mr. HAUGEN. Yes; he should either be permitted to pay for the services or he should be furnished with the article free, or make adequate proof that their serums are up to the standard.

Dr. MELVIN. The manufacturers, at least part of them and probably the greater part of them, would be glad to have such supervision.

Mr. HAUGEN. They would be glad to have such supervision, but, as I have said, nobody would undertake to manufacture an article and sell it in competition with an article that is being sold at cost by the States, and the State plant being subsidized to the extent of \$100,000.

Dr. GALLOWAY. There are 75 or 80 of them doing it now.

Mr. HAUGEN. That is under regulations, but not all up to the standard.

Dr. GALLOWAY. We propose to have inspectors to see that the serum manufactured is up to a standard.

Mr. HAUGEN. If it is going to be brought up to a standard where you can expect success and it is too expensive and a losing proposition at the start, they will not undertake to manufacture it.

Dr. MELVIN. It will take some years yet, Mr. Haugen, to reach that stage.

Mr. HAUGEN. You take the statement of Parke, Davis & Co. Over a year ago they said they would have nothing to do with it, and no concern with any standing, of course, will undertake it; that is, any firm with fair business judgment.

Dr. MELVIN. One of the greatest manufacturers of biological products in the world in Philadelphia is making it, and many large drug establishments in other States are making it.

Mr. McLAUGHLIN. Did Parke, Davis & Co. say why they would give up the business of making the serum?

Mr. HAUGEN. Yes; I believe they did, but I do not remember just why.

Dr. MELVIN. It is quite a difficult product to make and the rate of profit is very small compared with other antitoxins and vaccines where there is probably 100 per cent profit. It is impossible to get such a profit out of the hog-cholera serum and to have it within the reach of those who desire to use it.

Mr. McLAUGHLIN. Have you found and do you believe that such inspection of these factories as you made or will be able to make will determine the virtue of the serum? Is it not necessary to actually use and apply it in order to see whether it is going to be a cure or not?

Dr. MELVIN. I think both would be necessary.

Mr. HAUGEN. You can test it only by applying it?

Dr. MELVIN. Yes, sir. You must first see that you have hogs sick enough to produce the proper virulence of the blood; then you must see they are making it in an antiseptic manner, not contaminated with other bacteria that would set up blood poison and things of that sort; and then, finally, you must test it on a live animal. These tests must be made occasionally.

Mr. HAUGEN. Now, then, would you describe the process of making it and the time required to prepare it and have it ready for use?

Dr. MELVIN. Well, it extends over quite a bit of time.



Mr. HAUGEN. First you draw the blood from a cholera hog?

Dr. MELVIN. You get your immune hog first, then you get your blood from a hog that is sick with cholera and inject a certain amount of that into this immune hog and produce what we call a hyperimmune, and then from him draw the blood and use that blood in this immunizing work.

Mr. HAUGEN. That is mixed, I understand, with carbolic acid?

Dr. MELVIN. That is merely to preserve it.

Mr. HAUGEN. How long would that take?

Dr. MELVIN. That would take, I think, about 10 days.

Mr. HAUGEN. Then you test it by applying it on a hog?

Dr. MELVIN. Ordinarily they would use that right away. They do not test all of these different batches. Some do. Some take the blood and serum from several hogs and then try it to see whether it does protect or not. They inoculate a hog or two hogs with this diseased blood, and then also with the serum, to see whether it does render them immune or not. That is the proper way to do it.

Mr. HAUGEN. How long does it take to manufacture this serum or prepare it ready for use?

Dr. MELVIN. Well, I would say about two weeks.

Mr. HAUGEN. Now, I have a distinct recollection of a number of people receiving letters from parties—that is, from the concern at Ames—stating it would take from six to eight weeks.

Dr. MELVIN. Oh, no.

Mr. HAUGEN. I presume that includes the test?

Dr. MELVIN. Yes; if they test it, and all, it would take that long, probably.

Mr. HAUGEN. You would not send it out without testing, would you?

Dr. MELVIN. It ought not to be sent out without testing; no.

Mr. HAUGEN. What is the time required? Let us get at something definite. Including tests and all, how much time would it take to make it safe to send it out?

Dr. MELVIN. Five to six weeks.

The CHAIRMAN. How long would this serum remain potent, Doctor?

Dr. MELVIN. It should be kept in a cool place, and we have used it from six to eight months old under those conditions.

Mr. HAUGEN. In Dr. Dorset's statement, I believe he says it has retained its potency for years.

Dr. MELVIN. I presume it would.

Mr. HAUGEN. Have you any definite knowledge as to that? The claim out in our country is that it can only be kept for a few months.

Dr. MELVIN. Oh, no; we have kept it in an ordinary cellar in a house in Ames for six to eight months. Now, I do not know how much longer it would remain potent.

Mr. HAUGEN. You have no definite knowledge as to that?

Dr. MELVIN. No definite knowledge; but we know the minimum is six to eight months. We do not know the maximum.

Mr. HAUGEN. Do you believe it would be safe to use it after a year?

Dr. MELVIN. If kept under good, cool conditions.

Mr. HAUGEN. Would you recommend that?

Dr. MELVIN. No; I would not recommend it.

Mr. HAUGEN. Of course anybody using it would want a serum that would prove effective.

Dr. MELVIN. All these biological products, Mr. Haugen, as a general proposition, are better to use fresh than old, because there are some conditions that might arise and spoil them—heat, the light, or a defective cork.

Mr. HAUGEN. The question is often asked as to how long they will retain their potency.

The CHAIRMAN. The doctor has said six or eight months.

Mr. HAUGEN. You would not say a year?

Dr. MELVIN. No; I would not say any absolute time that should be fixed for it.

Mr. HELGESEN. Could sufficient printed instructions be issued so that the farmer could apply this without the aid of a veterinary?

Dr. MELVIN. I think so, but of course it would depend on the individual having had some experience and being instructed in the way of using it and the cleanliness to be observed. I think the average farmer could use it after having such instructions.

Mr. HELGESEN. Would it not be a good idea to issue such printed instructions; because you know that after you tell him a good many things he is apt to forget unless he has it in print?

Dr. MELVIN. The best way is for him to be instructed personally by a demonstration in the use of it, because then he sees how to apply it.

Mr. HELGESEN. I think so, too, but even then I think it would be wise to have printed instructions.

Dr. MELVIN. It is like castrating calves, hogs, and things of that sort. Some farmers do that successfully all the while, and others always have trouble with it.

Mr. HELGESEN. What do you figure the cost per hog is?

Dr. MELVIN. I think that the whole thing would probably average about 35 cents a hog.

Mr. HAUGEN. What do you mean by "average"? Is it according to the weight of the hog?

Dr. MELVIN. Yes. I mean to take the hogs according to the average run, including large ones and small ones.

Mr. HAUGEN. Take, say, a 200-pound hog, or a 100-pound hog, how many cubic centimeters would it take for a 100-pound hog?

Dr. MELVIN. About 25.

Mr. HAUGEN. Now, I think in our country they are using about 35. I think the circular sent out says it requires 35 cubic centimeters for a 75-pound hog, and you say 25. Now, you say in the hearings somewhere that it is being sold at 2 cents a cubic centimeter. That would be 50 cents for a 100-pound hog.

Dr. MELVIN. I do not know what the prices of the manufacturers are.

Mr. HAUGEN. The statement here by some one is that it costs 1.9 cents a cubic centimeter.

Dr. MELVIN. That is about the cost price of it; yes. That does not include any service in connection with it.

Mr. HAUGEN. The States sell it at cost, do they not?

Dr. MELVIN. Not absolutely, because some of them sell it for a little more. For instance, in the State of Ohio they accumulated the first year \$50,000 selling this serum at an average of about 35 cents a dose.

Mr. HAUGEN. They sell it at so much per cubic centimeter?

Dr. MELVIN. Yes.

Mr. HELGESEN. How much a dose?

Dr. MELVIN. About 35 cents a dose.

Mr. HELGESEN. That means the average for the large hog and the small one?

Dr. MELVIN. Yes.

Mr. HAUGEN. Now, you said the serum should be furnished by the State. That is the recommendation you made?

Dr. GALLOWAY. Only for part of this work.

Mr. HAUGEN. We are talking now about the serum.

Dr. GALLOWAY. That is what I am talking about, too.

Mr. HAUGEN. You say that should be furnished by the States?

Dr. GALLOWAY. That is where the work is to be demonstrational, out among the people, and not involved in this county-eradication work.

Mr. HAUGEN. Now, then, do you propose to put inspectors in plants operated by the States?

Dr. GALLOWAY. No; except where they are doing an interstate commerce business.

Mr. HAUGEN. Now, Dr. Melvin stated before this committee the other day he was afraid to trust the States. Is not that the statement?

Dr. MELVIN. I think where they are selling in other States, as some of them have been, they ought to be under supervision.

Mr. HAUGEN. What we are trying to get at here is something practicable, something to bring results, and that is what we asked you here for this morning—to see if we can not work out a plan.

Dr. GALLOWAY. We have submitted a definite and we believe a practical plan.

Mr. HAUGEN. Your suggestion is that the serum should be furnished by the States, and a suggestion of one in your department is that the States can not be trusted. Now your suggestion here is to provide an appropriation of \$300,000 for work in 15 counties—that you would be able to take care of 15 counties out of 2,500. Somebody has suggested that Congressmen who have some pull somewhere will be able to get it for their counties and there will not be enough to go around in every district, since there will be about 2,498 counties which will not have any service at all. Now, the question is, we want to have something that is practical and proper, and I have come to the conclusion that the only way to afford relief is to adopt the serum you have provided; but it will be of no effect unless we can supply the serum. The only way we can supply it, in my estimation, is by the Federal Government manufacturing and disposing of it and selling it practically at cost. You have provided a remedy which I believe has merit, but, at the same time, is not available, as I can not conceive that a sane business man would go into the business of manufacturing a serum and selling it in competition with an article that is sold at cost and subsidized to the extent of \$50,000 or \$100,000, or indeed by the States.

Mr. McLAUGHLIN. But the supply of the subsidized factories, it seems to me, is so small.

Mr. HAUGEN. Read the hearings and you will find 30 of them.

Mr. McLAUGHLIN. Not the subsidized factories?



Mr. HAUGEN. I believe you stated 25. My State has appropriated \$25,000, and Ohio has built a laboratory costing \$100,000.

Dr. MELVIN. You call the State institutions subsidized institutions?

Mr. McLAUGHLIN. The State aids them; it appropriates money to purchase the material and pays the overhead charges and all of those things. That is the subsidy.

Dr. MELVIN. All of those things are practically only in an experimental stage. The one at Tennessee is small. It is all right as far as it goes, but it is small.

Mr. HAUGEN. You purchased serum for your own use last year from Missouri?

Dr. MELVIN. Yes.

Mr. HAUGEN. We gave you \$75,000 to operate in four counties, and you were obliged to go to the State of Missouri and purchase serum from them?

Dr. MELVIN. Do you know why?

Mr. HAUGEN. I do not know why.

Dr. MELVIN. Do you want to know why? I will tell you why. It is because the money was not available until the 1st of July, and we had to have our temporary buildings put up, our laboratory equipment installed, and we had to do all of that after that time, and it took time to do that—to get these buildings erected and to put in the laboratory equipment and all that sort of thing; and in order to get the work going; and until we could supply as much serum as was required we bought some from Missouri.

Mr. HAUGEN. I supposed the work began in the four counties simultaneously?

Dr. MELVIN. No; it did not.

Mr. HAUGEN. Very well; I do know that there were hundreds and hundreds of people in our State that wanted the serum, who were writing for it, and asking for it, and the reply was "We are manufacturing a batch which will be ready in six or eight weeks, and we will be glad to supply it in the order of the orders filed with us." Now, that is the situation. We are dealing here with a monstrous proposition. What is your estimate of the loss last year in hogs?

Dr. MELVIN. I would put it all the way from \$50,000,000 to \$100,000,000.

Mr. HAUGEN. Suppose it is \$50,000,000. We have the remedy; that is, it has been prescribed, but it is not available. Now, then, if you get a doctor and he prescribes, is it not well also to have some place to have that prescription filled? It is not of any value unless it is filled.

The CHAIRMAN. Let me ask you this question: We have a remedy for typhoid fever.

Dr. MELVIN. Exactly.

The CHAIRMAN. Do you think the Federal Government should manufacture and distribute that remedy?

Dr. GALLOWAY. We have a remedy for diphtheria, also.

The CHAIRMAN. A remedy for diphtheria and a remedy for small-pox.

Mr. HAUGEN. We have a remedy for the eradication of the cattle tick in the South, and we supply the vats and furnish the remedy. We buy and give away garden seeds. We furnish horses for breeding purposes.

The CHAIRMAN. You have made that statement four or five times, and I am going to ask if that is true. Dr. Melvin, do you buy the vats and furnish the material?

Dr. MELVIN. No, sir. We are limited now, under the appropriation act, only to build the vat and furnish the remedy for experimental purposes. I think last year—1912—we built one vat. That was at a corn show and was for demonstration purposes only. As far as my recollection goes, that is the only one we actually built ourselves.

Mr. HAUGEN. We put it in the law last year prohibiting that.

Dr. MELVIN. It is unnecessary.

Mr. HAUGEN. But it is put there.

Mr. LEE. There is one in my home town and they all chipped in and built it.

Mr. HAUGEN. I do not object to that, but here is a different situation. Here is the remedy and there is no way of obtaining it.

The CHAIRMAN. Wait one minute; the department has a remedy for the eradication of the cattle tick. Doctor, are you supplying the arsenic and stuff to the farmers for dipping purposes?

Dr. MELVIN. Only in the way of demonstration.

The CHAIRMAN. Just exactly as you suggest here?

Dr. GALLOWAY. We have worked out remedies for all sorts of fungous diseases and there are millions of farmers and fruit growers using those remedies. The Government is not furnishing them.

Mr. HELGESEN. Mr. Chairman, is not the difference in those remedies and the hog-cholera serum that the others will keep indefinitely, while this is not only expensive but it will not keep? Take, for instance, in the State of North Dakota: We thought we were immune, for a short while, and last year hog cholera swept the State of North Dakota, and one man, out of 500 hogs, had only 14 left, and his neighbors all around him and people all over the State lost all the hogs they had. Now, in a State like Ohio it might be all right; but even though we might be willing to make the serum, the trouble is with us it is spasmodic. We might make up a supply of the serum and then before it is needed for use it would have lost its potency (and that might be so with other States), while with the Federal Government it is different, because hog cholera is always prevalent in different parts of the country.

Dr. MELVIN. More or less so.

Mr. HELGESEN. Now, with a large plant you could make a large quantity and know you could use it in some States, wherever the serum was necessary. In some States it would not be necessary and in some States it would be necessary. If the States do this, it would be necessary for them to make enough to take care of hog cholera within the States in the event they had it, and if they did not have it it would be a dead loss.

Dr. GALLOWAY. We are trying to work out a plan and so develop the work that within a few years it will be feasible for the farmer to buy and use the serum he needs and not have to depend upon the Federal Government except for the guaranty that the serum is good.

The CHAIRMAN. Dr. Galloway, have you figured out the cost of establishments and plants if the Federal Government manufactured the supply to meet the demand as it might come and go?



Dr. GALLOWAY. We have not dared to, Mr. Chairman.

Mr. HAUGEN. In your opinion, what is the cause of hog cholera? It is stated by one that it is due to germs, and by another one to improper feeding, and so on. Have you solved that problem?

Dr. MELVIN. The cause of it?

Mr. HAUGEN. Yes.

Dr. MELVIN. It is caused by a microorganism which is so small we have not been able to see it with the most powerful microscope. Experiments have shown definitely that an organism of some sort exists. It is just as impossible to have hog cholera develop without that germ being present as it would be to grow corn without the seed being present. Feeding and things of that sort probably have some slight effect upon the virulence of the disease, but not upon its origin. It can not originate spontaneously any more than corn can grow in a field where no seed has been planted.

Mr. HAUGEN. Now, it has been stated by some one that it is extremely contagious; it can be carried from one farm to another by a small piece of dirt on the shoe; it can be carried by birds; and it can be carried by the streams. Now, then, do you think it is possible to eradicate hog cholera?

Dr. MELVIN. Well, it would be a tremendous job, and it would require years, but I think it could be done and will eventually be done. You can liken the contagiousness of hog cholera to that of the foot-and-mouth disease, which is also a disease the germ of which has not been discovered. It is just as contagious, and yet we have eradicated the foot-and-mouth disease in a comparatively small area.

Mr. HAUGEN. Yes. Now, hog cholera came here, as I understand, in 1833. I think that is the statement in some bulletins. They had it a good many years before that in England, and they had been experimenting over there. Now, do I understand you to contend that if it was not possible for England to eradicate it, if they failed and went to the extent of condemning the hog and reimbursing the owners, that it can be done here?

Dr. MELVIN. Their method was different. The Canadians claim to have eradicated it from Canada, and have had it eradicated for some two or three years now. It was introduced originally, they claim, from the United States.

The CHAIRMAN. How long did it take them to eradicate it in Canada? Do you know?

Dr. MELVIN. I do not know exactly, but several years. But they have very few hogs, comparatively, in Canada.

Mr. HAUGEN. If hog cholera was confined to a small area, like the foot-and-mouth disease, I do not think there would be any question about it; but they have it, as I understand, in 38 States.

Dr. MELVIN. Still there are times when hog cholera is comparatively at a low ebb, when there is hardly any of it in the United States; and if each of these States was properly equipped and the Federal Government working with them at those stages we could take advantage of it. But as it is right now, and as it has been for the past several months, where it is widespread and the hogs are dying by the thousands, we could not handle it under those conditions.

Mr. HAUGEN. It is true it does not spread so much in cold weather, with snow on the ground, but it is also true that if you have hog

cholera in the same area there will be outbreaks from year to year. For instance, where you had hog cholera in 1912 you also had it in 1913.

Dr. MELVIN. But, for instance, you take it in the course of five or six years, and there will be periods when there is very little of it in the country.

Mr. HAUGEN. My contention is that it is spread all over the country, and while many of the germs die during one year, yet there are enough left to start cholera the next year, and you never can tell where it will break out in the various States in the country, wherever it had prevailed the previous year. So, it is not confined to a small area by any means at any time of the year. The area is practically always about the same.

Mr. McLAUGHLIN. Mr. Chairman, I guess it is my fault that I did not fully understand the plan of the work. You outlined, Dr. Galloway, two or three different lines of work. Could you please give us a little more detail of the lines of work proposed under these different heads and different appropriations?

The CHAIRMAN. Before you do that, Doctor, I was just about to ask him to please give us a résumé for the record of just exactly what the department proposes. You have already done it, but I want to ask you to do it again. How much money do you think you could use and follow your plans?

Dr. GALLOWAY. We have more confidence in the plan of eradication than any other project that we have in view. We believe that will be the ultimate procedure in handling this hog-cholera proposition, and therefore we propose to use the major portion of this money in demonstrating the practicability of eradicating hog cholera from given sections of the country. To do that we must, of course, get the cooperation of the State sanitary boards and individuals raising hogs within those sections, and we take as the unit section the county.

Mr. McLAUGHLIN. Right there. In this matter of eradication, when that was spoken of, a plan of work was under discussion a few days ago and I asked the question, "Suppose you took a county and were working there with the idea of eradicating the cholera; and, now, suppose the cholera prevails in the territory around there, near by, and your assistance is asked; you could not give it because the territory in which you are confining your efforts is entirely within the one county?"

Dr. GALLOWAY. Oh, we would give it.

Mr. McLAUGHLIN. My impression was that you did not, and it seemed to me you were limiting your activities there when you might very well extend them to every place where the work is needed.

Dr. GALLOWAY. That is the object of the remaining appropriation—to take care of the conditions you just mentioned. The first project, however, is to concentrate our energies and activities in the eradication work, and we think we can determine this year the actual cost of the work in a county and the actual return in money value for the work done. In this work we must make our own serum, and we must control the hogs and farmers and see that all directions are carried out and all quarantine measures are followed. And to do that we must have the help of the State and county officials. To do this work in 15 counties will require about \$300,000, or \$20,000

per county. The \$50,000 we propose to use in the securing of competent inspectors, laboratory-trained men, who can go into the establishments where the serum is now being made and can stay right on the ground and see to it that all the conditions necessary to insure a thoroughly effective serum are complied with. Otherwise, under the law passed last year, we can take the license away from the people. In this way we will be protecting the State against spurious serum and gradually be training those people in the proper manufacture of serums. That leaves \$150,000 which we can use for general demonstration work among the farmers themselves.

Mr. McLAUGHLIN. Would you have any difficulty in getting men who are really competent?

Dr. GALLOWAY. I do not think so; would we, Dr. Melvin?

Dr. MELVIN. No.

Dr. GALLOWAY. We would, then, use this \$150,000 for the general propaganda and demonstration work, and we can, if called upon, take just such places as you mentioned a while ago, where the farmers in an adjacent county want help and, cooperating with the State, the State furnishing the serum, we can go in there and, with our veterinarians and the people we have doing this work, comply with these requests as we go along. We can also use our county agents and demonstrators wherever they are available. All of this work is in the direction of spreading knowledge as to how to use the serum and how to make and improve it; and at the same time we are carrying out a general plan of eradicating the disease from given localities and thereafter at small expense keeping it out.

Mr. McLAUGHLIN. I have thought that your work in a particular county—your effort to eradicate it from that county—was very good indeed, but the territory in which you work is so small I have doubted the wisdom of using that word “eradicating,” because it suggests your work must be limited to that territory, and you could not go over the line. Of course, it would be all right if you could cover the country in a reasonable time, but the work is of such a nature that it seems to me if you go into a county with the idea of eradicating it, you would not be able to go across into another county, and you could not do as much good as you might otherwise do.

Mr. HAUGEN. To what extent did you do this work last year?

Dr. MELVIN. I think the ultimate result to be kept in mind should be the eradication of this disease. We can probably do more temporary good (while I will not even admit that, but we could do a great deal of good) by simply sending this serum out here, there, and everywhere, where people want it; but we would not be learning anything with reference to the methods to be adopted for the ultimate eradication of the disease; and I think we want to finally try to put an end to the malady. That, I think, is the ultimate object, and I think in the course of years it will be possible to do it. But if we do not go at it systematically, with ways and means of doing this, 10 years from now we will not be any farther advanced than we are now.

The CHAIRMAN. You mean to say, if we adopt a plan here, if Congress compels you to apply your efforts to the manufacture and distribution of hog-cholera serum, that 10 years from now, under such a plan, you would not be any nearer a solution of the problem than you are now?



Dr. MELVIN. No, sir; we would not be any nearer to it than we are now.

Mr. HAUGEN. You think that would destroy the usefulness of your bureau?

Dr. MELVIN. I think it should be done separately.

Mr. HAUGEN. I say, in connection with the work you are doing, to provide for the distribution of the serum?

Dr. MELVIN. That is what Dr. Galloway has indicated.

Mr. HAUGEN. No; I am talking now about the manufacture of the preparation.

Dr. MELVIN. That is what he has in mind—\$300,000 for eradication and demonstration work along that line.

Mr. HAUGEN. Exactly. That is the manufacture of the serum for your own use and to employ in the demonstration work in the 15 counties. But I understood Dr. Galloway to say you had done some outside work, and my question was to what extent have you gone outside of these four counties?

Dr. MELVIN. Not a great deal, because we have not the facilities for doing it.

Mr. HAUGEN. Did you go outside at all?

Dr. MELVIN. In a few instances.

Mr. HAUGEN. How many?

Dr. MELVIN. Oh, I do not know; not many.

Mr. HAUGEN. Is it not a matter of fact that you claim you did not have money enough to carry on the demonstration work in the four counties?

Dr. MELVIN. No; it is going on now. We do not need anything in Missouri, and we have not developed the work entirely in Nebraska, although we have a man stationed there who is canvassing the county and getting data and information for us.

Mr. HAUGEN. Some one told me the other day that in Delaware County they were \$10,000 short and they would not be able to prosecute the work.

Dr. MELVIN. Not in Delaware County—Dallas County.

Mr. HELGESEN. In speaking of the 15 counties, is it your idea to take them in a bulk?

Dr. GALLOWAY. No, sir.

Mr. HELGESEN. You will take up the work in different sections of the country so as to get the conditions?

Dr. GALLOWAY. Yes, sir; climatic and other conditions.

The CHAIRMAN. You made the statement a moment ago that unless this money could be had by the 1st of March that you could not use it to the best advantage?

Dr. GALLOWAY. Yes, sir.

The CHAIRMAN. I think it is safe to assume that this bill will not become a law before the 1st of March, and, acting upon that assumption, what amount do you suggest, if we carry any amount in this bill, that we should put into the bill?

Dr. GALLOWAY. I would not carry it in the bill at all.

The CHAIRMAN. You would not carry any in the bill at all?

Dr. GALLOWAY. I would eliminate the hog-cholera item from the bill.

(Thereupon, at 11.50 o'clock a. m., the subcommittee adjourned subject to the call of the chairman.)

## EXHIBIT.

### DEMONSTRATING METHODS OF PREVENTING AND ERADICATING HOG CHOLERA.

*Cost, July to December, 1913, inclusive.*

Serum plant at Ames, Iowa, including salaries, supplies, hogs, etc.....	\$24,150.69
Field work in three counties.....	16,272.88
Preliminary work in one county.....	342.70
Total expenditure to Jan. 1, 1914.....	40,766.27

*Report on treatment of hogs in healthy herds exposed to hog cholera.*

	Hogs.	Died.
Pettis County, Mo.....	5,802	12
Montgomery County, Ind.....	4,562	53
Dallas County, Iowa.....	3,149	16
Total.....	13,578	81

Per cent loss, 0.5+.

*Report of treatment of hogs in infected herds.*

	Hogs.	Died.
GROUP A.		
Approximately 70 per cent sick when treated:		
Pettis County.....	5,904	1,038
Montgomery County.....	4,562	894
Dallas County.....	5,686	1,998
Total.....	16,152	3,930
Per cent loss.....		24.3
GROUP B.		
Well when treated, but kept in herds with sick hogs:		
Pettis County.....		
Montgomery County.....	4,961	119
Dallas County.....	6,815	224
Total.....	11,776	343
Per cent loss.....		2.9

*Losses in three counties in 1911, 1912, and 1913.<sup>1</sup>*

Years.	Dallas County.			Pettis County.			Montgomery County.		
	Hogs raised.	Hogs lost.	Loss.	Hogs raised.	Hogs lost.	Loss.	Hogs raised.	Hogs lost.	Loss.
1911.....	77,274	11,337	<i>Per ct.</i>	62,590	13,740	<i>Per ct.</i>	73,920	20,414	<i>Per ct.</i>
1912.....	84,618	19,821	18.9	59,661	20,550	25.6	74,554	23,983	24.3
1913.....	118,550	9,182	7.1	59,792	10,376	14.7	75,974	5,098	6.2
Before July 1, 1913.....		5,289			9,035				
After July 1, 1913.....		3,893			1,341				

<sup>1</sup> Figures based on returns secured November 15, 1913. Work has only begun in Nebraska, therefore no figures are available for that State